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Intelligence Report

Soviet Arms to LDCs: A Soviet-US Price Comparison

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**Soviet Arms to LDCs:
A Soviet-US
Price Comparison**

DISCUSSION

Concepts and Methods

1. This paper presents preliminary estimates of Soviet military equipment exports to less developed countries during 1971-75 valued at what it would cost the United States to duplicate this equipment. These estimates are compared with estimated Soviet military exports based on known export prices. In both cases, quantities of Soviet equipment sold or delivered are then multiplied by their respective costs to obtain dollar values.

2. The prices Moscow charges for military equipment exports to the LDCs are strongly affected by political considerations and reflect competitive factors only to a limited extent. The market for modern arms is highly segmented, there are few areas of direct competition between Western and Soviet arms, and where such competition exists the equipment offered differs greatly. At the same time, Moscow's prices have no apparent relation to the cost of producing the arms in the USSR. Until about 1970, Soviet arms were sold abroad at one-half to two-thirds of the price of the most comparable Western equipment, and large discounts from these list prices were given to favored customers. In recent years, the differences between Soviet and Western export prices have narrowed. [redacted] Moscow has increased the prices of military equipment it sells LDCs and has offered fewer discounts.

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3. Soviet export prices for military equipment reflect the financial flows attributable to arms trade between the USSR and the recipient. They are best used to estimate

- the value of military aid and deliveries in Soviet and recipient trade accounts;
- repayments of military aid; and
- the debt accumulated on military account.

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Note: Comments and queries regarding this report are welcomed. They may be directed to [redacted] Office of Economic Research, [redacted]

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For these reasons the annual and monthly CIA publications on Communist economic and military aid to LDCs have used, and will continue to use, Soviet export prices.

4. When the entire military establishments of the Soviet Union and the US are compared, a different cost concept is used. The estimated dollar costs of Soviet programs represent what it would cost the US to carry out the Soviet programs. These estimates, of course, cannot by themselves be used to assess military effectiveness per dollar spent nor do they measure actual Soviet defense expenditures or their burden on the economy. In comparing the costs for individual pieces of US and Soviet military equipment, it should not be assumed that differences in cost for similar pieces of equipment measure differences in their effectiveness or capabilities. Cost differences may reflect only differences in the design philosophies of the two countries.

5. CIA has applied dollar costs estimated in this manner to exported Soviet military equipment on a number of earlier occasions—for example, for Soviet deliveries to North Vietnam and Angola. Estimated dollar costs have also been used as a surrogate when no Soviet export prices were available. Those earlier estimates, however, were based on ad hoc calculations. The estimated dollar costs of Soviet equipment used in this report to generate dollar costs of Soviet military exports represent a systematic approach.

6. The estimated dollar costs of Soviet arms exports can be compared with

- the estimated dollar costs for other Soviet military programs, and
- the cost of US items of equipment comparably defined.

Findings

7. The estimated dollar cost of Soviet arms delivered to Third World countries in 1971-75 is about US \$8.7 billion. This compares with \$6.4 billion at Soviet export prices—a difference of 35% (see Table 1). On a US cost basis, Soviet arms exports to LDCs accounted for about 1% of Soviet military expenditures expressed in the same values in 1971-72, and 2% in 1973-75. The similar US ratio was about 1.5% in 1971-72 and 3% in 1973-1975.

Table 1**Soviet Arms Deliveries to LDCs**

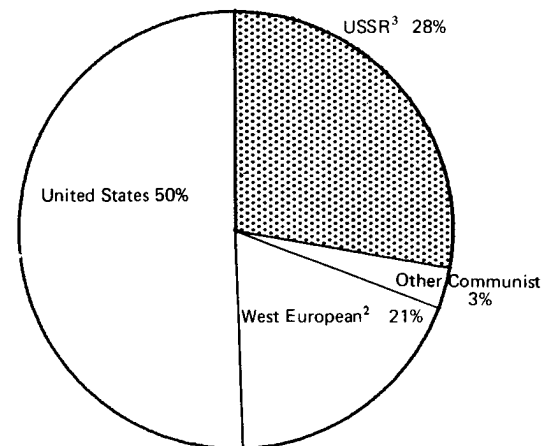
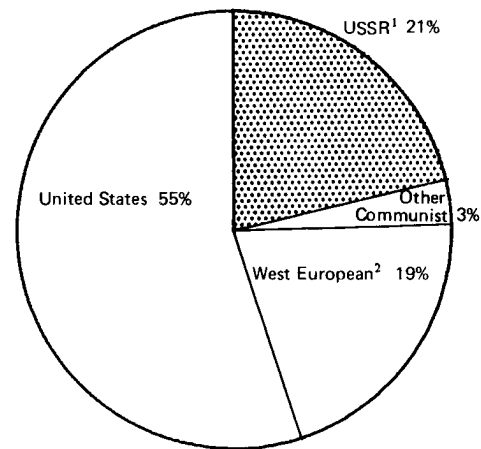
Million Current US \$		
	US Cost of Production	Soviet Export Prices
Total	8,717	6,437
1971	1,154	843
1972	1,184	797
1973	2,505	2,070
1974	2,089	1,445
1975	1,785	1,282

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8. For the period 1971-75 differences between Soviet export prices and estimated dollar costs based on what it would cost to duplicate the Soviet systems in the US were largest for newer, more sophisticated military items (Appendix B, Table 2). The dollar prices are closer for conventional weapons, including armored vehicles and other land armaments. Our estimates of Soviet export prices for missile systems, and for some other items of equipment for which we have no Soviet price information, were already derived from US production costs. The cost of producing major categories of Soviet military equipment in the United States exceeded the estimated Soviet export prices by the following percentages:

	Percent
Tanks	111
Armored vehicles	11
Artillery, guns, rocket launchers	4
Bombers	36
Fighters	76
Helicopters	54
Naval Ships, pontoon bridges	60
Radar and other electronic equipment	28

Arms Deliveries to the Third World, 1974-75



1. Soviet trade prices.

2. Including negligible amount of arms delivered by non-European suppliers.

3. Estimated dollar costs of Soviet equipment if duplicated in the United States.

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Aircraft and naval craft accounted for about 50% of Soviet arms deliveries between 1971 and 1975. Missiles accounted for 13% of the deliveries; armored vehicles, 15%; and other land armaments, 8%.

9. Wide variations in the annual composition of equipment delivered, overall and to different clients, causes changes in the spread between the two estimates. The widest spread (almost 50%) developed in 1972, when aircraft for Egypt made up a quarter of Moscow's total arms deliveries.

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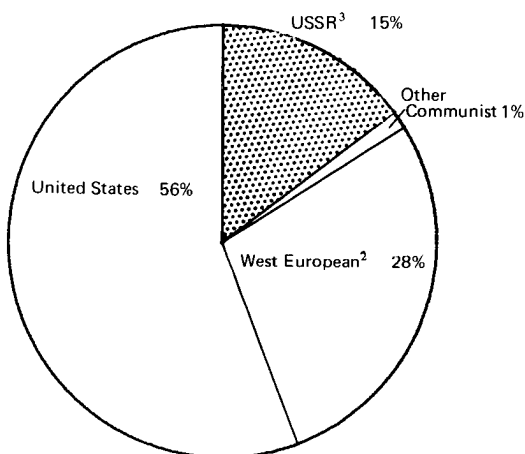
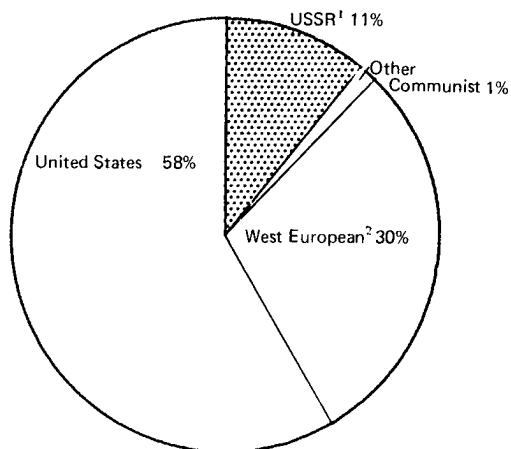
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10. Based on export price data, four clients—Egypt, India, Iraq, and Syria—took delivery of \$4.9 billion of Soviet arms in 1971-75, three-fourths of Moscow's total deliveries in those years. The cost of these deliveries is 33% higher when estimated in terms at what it would cost to duplicate them in the United States. Table 2 compares these deliveries under the two pricing assumptions.

11. The divergence between estimated dollar costs and Soviet export prices was largest for Syria (49%), because of heavy imports of MIG-21 jet fighters. In dollar terms, the estimated cost to reproduce this system in the US is more than twice the Soviet export billing. For Egypt, India, and Iraq, the difference in value was only about 25% because, although aircraft deliveries were large, high performance aircraft bulked less heavily. Differences in the composition of Moscow's exports to its major arms clients (based on dollar cost of production of the equipment in the United States) are shown in Table 3 and in Appendix B, Table 3.

12. The spread between estimated dollar costs and Soviet export prices is expected to be somewhat larger in 1976 than for the previous five-year average.

Arms Sales to the Third World, 1974-75



1. Soviet trade prices.

2. Including negligible amounts of arms sold by non-European suppliers.

3. Estimated dollar costs of Soviet equipment if duplicated in the United States.

544-014

Table 2

Soviet Deliveries to Major Clients 1971-75

	Million Current US \$	
	US Cost of Production	Soviet Export Prices
Syria	2,527	1,691
Egypt	1,788	1,375
Iraq	1,281	1,052
India	879	734

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Table 3
Composition of Soviet Arms Deliveries to Major Clients
1971-75

	Percent			
	Egypt	India ¹	Iraq	Syria
Armored combat vehicles	12	3	16	22
Land armaments	3	Negl.	4	5
Aircraft	50	24	57	54
Ships, pontoon bridges	6	23	10	4
Missiles	13	3	5	9
Support equipment	17	47	8	5

1. Adjusted to reflect large amounts of Soviet equipment supplied to India for licensed production of MIG-21 aircraft and for naval support.

Deliveries to Libya and Algeria run heavily to jet aircraft and tanks, whose estimated dollar costs are far higher than the export price Moscow charges. Other major recipients—India, Iraq, and Syria—continue to receive sizable deliveries, generally of the same type of equipment as received in recent years.

International Comparisons

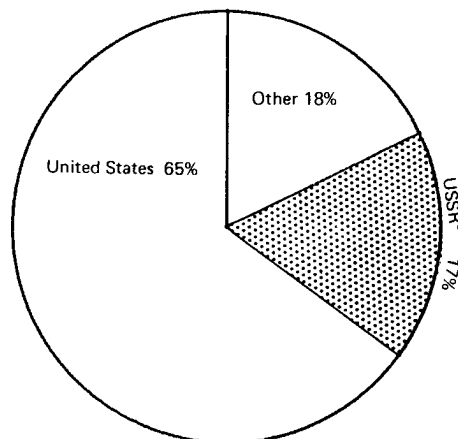
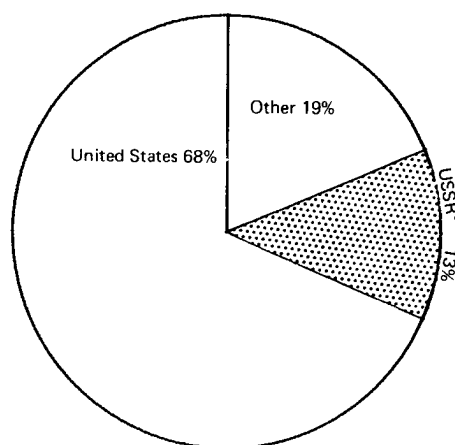
13. Besides valuation problems, international comparisons of military sales to LDCs must be used with great caution because of large differences in coverage of the selected series. CIA estimates of Soviet military sales cover only equipment, whereas United States sales and deliveries include about 25% for military support. Such support often includes civil construction activity for base facilities, maintenance, and repair facilities including equipment and major outlays for training operational and maintenance personnel. The amount of such support expenditures included in arms sales estimates of other major Western suppliers is not known. Soviet support is limited largely to technical services for assembling equipment, training, and in some cases, operating the equipment. Civil construction is not usually included as part of Soviet military sales to LDCs. In a few cases the USSR has funded facilities to support military operations with economic aid.

14. It is not possible to estimate the dollar cost of total Soviet arms exports because of insufficient information on Soviet deliveries to Communist countries.

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Current estimates of Soviet military exports to these countries are generally obtained from residuals in Soviet trade statistics—that is, by deducting listed exports of civilian goods from total Soviet exports to particular countries.

Global Arms Sales, 1974-75



1. Soviet trade prices.
2. Estimated dollar costs of Soviet equipment if duplicated in the United States.

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15. As shown in Figures 1-3 and Table 4, if the dollar cost of duplicating the Soviet systems are used instead of export prices for Soviet arms sold in 1974-75, neither Soviet nor US market shares would change significantly. This is true for both worldwide sales and those to LDCs. The Soviet share of worldwide sales would increase from 13% to 17% by using the estimated dollar costs, and its share of the LDC market would rise from 11% to 15%.

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Table 4
US and Soviet Shares of Global and LDC Arms Market

	1974				1975			
	Export Prices		US Cost of Production		Export Prices		US Cost of Production	
	Million US \$	Percent of Total	Million US \$	Percent of Total	Million US \$	Percent of Total	Million US \$	Percent of Total
Global sales	33,492		35,532		29,012		30,345	
Of which:								
US ¹	23,097	69	23,097	65	19,735	68	19,735	65
Soviet	4,573	14	6,613	19	3,417	12	4,750	16
Sales to LDCs	18,605		19,706		16,272		16,781	
Of which:								
US ²	10,865	58	10,865	55	9,505	58	9,505	57
Soviet	2,469	13	3,570	18 ³	1,304	8	1,813	11 ³

1. Fiscal years.

2. Calendar years.

3. If the costs of Soviet technical services are included, the Soviet share would be increased by 1 percentage point under each pricing assumption.

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APPENDIX B

STATISTICAL TABLES

Table B-1

Value of Soviet Arms Deliveries to LDCs¹

Million US \$

	Total		1971		1972		1973		1974		1975	
	US Production Cost ²	Soviet Export Price	US Production Cost	Soviet Export Price	US Production Cost	Soviet Export Price	US Production Cost	Soviet Export Price	US Production Cost	Soviet Export Price	US Production Cost	Soviet Export Price
Total	8,717	6,437	1,154	843	1,184	797	2,505	2,070	2,089	1,445	1,785	1,282
Near East and												
North Africa	6,797	5,110	945	630	959	605	2,169	1,818	1,554	1,178	1,168	879
Algeria	96	78	36	35	12	10	7	5	24	15	16	13
Egypt	1,788	1,375	578	340	506	240	522	565	89	80	92	150
Iran	261	404	79	75	59	82	62	132	52	100	10	15
Iraq	1,281	1,052	46	30	121	80	471	352	402	336	241	254
Lebanon	3	3	Negl.	Negl.	2	3	....	....	1	N.A.	....	....
Libya	603	390	36	39	4	27	7	24	159	84	397	216
Morocco	9	6	....	....	....	....	1	2	1	Negl.	7	4
Syria	2,527	1,691	155	106	224	152	1,051	708	770	535	327	190
Yemen (Aden)	199	104	14	5	29	11	47	30	46	24	62	34
Yemen (Sana)	30	7	1	N.A.	2	N.A.	1	N.A.	10	4	16	3
South Asia	1,169	932	171	197	169	174	266	225	358	175	206	161
Afghanistan	227	149	27	15	20	17	53	41	104	57	23	19
Bangladesh	53	30	....	....	Negl.	Negl.	52	29	1	1	Negl.	Negl.
India	879	734	136	180	147	156	161	154	253	115	182	129
Pakistan	4	6	2	N.A.	2	1	Negl.	1	Negl.	2	N.A.	2
Sri Lanka	6	13	6	2	1	11

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Table B-1
Value of Soviet Arms Deliveries to LDCs¹
(Continued)

Million US \$

	Total		1971		1972		1973		1974		1975	
	US Production Cost ²	Soviet Export Price	US Production Cost	Soviet Export Price	US Production Cost	Soviet Export Price	US Production Cost	Soviet Export Price	US Production Cost	Soviet Export Price	US Production Cost	Soviet Export Price
Sub-Saharan												
Africa	640	311	37	16	55	18	62	22	143	67	344	188
Central African												
Republic	13	3	....	....	2	2	....	....	11	1	....	....
Chad	2	1	....	....	....	....	....	....	....	....	2	1
Congo	12	6	11	5	....	....	Negl.	Negl.	....	....	1	1
Equatorial												
Guinea	22	4	Negl.	Negl.	2	Negl.	....	....	N.A.	1	21	3
Ethiopia	2	N.A.	Negl.	Negl.	1	N.A.	1	N.A.	....	....	....	....
Gambia	Negl.	Negl.	....	....	....	....	....	....	....	....	Negl.	Negl.
Guinea-Bissau	9	5	....	....	....	....	....	....	Negl.	Negl.	9	5
Guinea	57	39	7	5	10	8	7	2	10	7	23	17
Mali	19	10	3	1	Negl.	Negl.	3	1	1	Negl.	11	8
Mozambique	16	12	....	....	....	....	....	....	....	....	16	12
Nigeria	79	41	N.A.	1	N.A.	1	1	N.A.	....	....	78	39
Somalia	235	118	3	1	24	6	39	18	86	43	84	50
Sudan	57	14	13	3	15	N.A.	2	N.A.	26	11	Negl.	Negl.
Tanzania	5	4	....	....	Negl.	Negl.	1	N.A.	....	....	5	4
Uganda	105	49	....	....	....	....	8	1	8	3	90	45
Zambia	7	5	....	....	1	1	....	....	1	1	4	3
Latin America	110	84	....	....	....	....	8	5	35	25	67	54
Peru	110	84	....	....	....	....	8	5	35	25	67	54

1. Because of rounding, components may not add to the totals shown.

2. Estimated dollar costs of Soviet equipment if duplicated in the United States.

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Table B-2
Relative Prices of Soviet Equipment Deliveries
to LDCs, 1971-75

Major Category	US Production Costs ¹ (Soviet Export Prices = 100)
Land Equipment	116
Tanks	211
Armored Vehicles	111
Artillery, Guns, Rocket Launchers	104
Support items, including trucks	96
Aircraft	169
Bombers	136
Fighters	176
Helicopters	154
Trainers	240
Transports	147
Naval Ships, Pontoon Bridges	160
Missiles and Missile Equipment	98
Radar and Other Electronic Equipment	128

1. Estimated dollar costs of Soviet equipment if duplicated in the United States.

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Table B-3

Soviet Equipment Deliveries to Major LDC Customers, 1971-75
(Valued at US Cost of Production¹)

Major Category	Egypt		India ²		Iraq		Syria	
	Million US\$	Percent	Million US \$	Percent	Million US \$	Percent	Million US \$	Percent
Total	1,788	100	879	100	1,281	100	2,527	100
Combat Vehicles, tanks	220	12	28	3	205	16	549	22
Land Armaments	46	3	4	Negl.	54	4	132	5
Aircraft	886	50	211	24	730	57	1,374	54
Ships, pontoon bridges	113	6	202	23	123	10	112	4
Missiles	224	13	22	3	69	5	230	9
Support equipment	299	17	413	47	101	8	130	5

1. Estimated dollar costs of Soviet equipment if duplicated in the United States.

2. Adjusted to reflect large amounts of Soviet equipment supplied to India for licensed production of MIG-21 aircraft, and for naval support.

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